

Anno  
Inaugural Dissertation  
on  
Tracheitis

By  
Charles Henri Whiting  
of the District of Columbia

1825. Read March 26<sup>th</sup>. 1823

1871

The  
Incorporated Association

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The disease to which the term, *Tracheitis*, or, Croup, has been applied, consists in an inflammation of the lining membrane of the Trachea and Larynx.

This affection may be primarily seated in the Trachea, as is generally the case, or it may be extended to it, from a neighbouring part in which a morbid action exists.

Croup appears to have been but little known to the older writers, as their accounts of it are very unsatisfactory.

The first who gave a distinct and rational description of it, was Martin Rhisi, a Physician of Cremona, who published a treatise in 1749. Dr Home of Edinburgh, whose practice in this disease was very extensive, wrote an essay on it in 1765; and Michaelis de Anginosa polyposa seu membranacea appeared in 1778, since which time

1840  
The first of the year  
was a very cold one  
and the snow lay  
on the ground for  
several days.  
The weather was  
very disagreeable  
and the people  
were much  
convinced that  
the winter was  
early and severe.  
The snow lay  
on the ground  
for several days  
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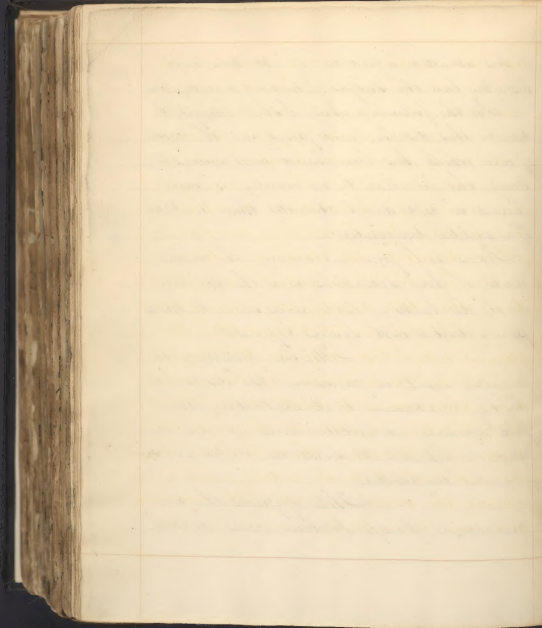
it has attracted a good deal of attention, and has often been the subject of medical investigation.

In the following pages I shall attempt to describe this disease, and point out the method of cure which has been found most successful. Croup, tho' peculiar to no country, is more frequent in cold damp climates than in those of a milder temperature.

It is very prevalent among the inhabitants of low situations near the sea coast, or on the banks of large rivers, where the atmosphere is loaded with aqueous vapours.

Moisture, perhaps, is the principle agent in producing the disease; by the long continuance of its application, the parts becoming debilitated and relaxed, are rendered less able to resist the impressions of a low temperature.

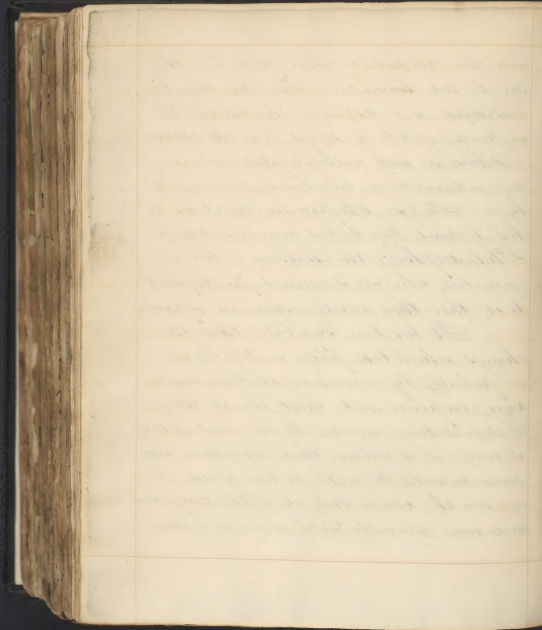
This appears the more probable, as Croup seldom occurs during



even the coldest weather provided the  
air be not humid. Tracheitis may be  
considered as a disease of childhood the  
no period of life is exempt from its attacks;

There are well authenticated cases of  
men advanced in life having been affected  
by it. Professor Chapman mentions in  
his lectures, two ladies now residing in  
Philadelphia, the mothers of large  
families, who are so much predisposed  
to it, that they rarely escape on exposure.

It has been supposed that the  
changes which take place in the larynx  
at puberty, by increasing its tone and  
vigor, empower it to resist the influence  
of debilitating agents. Be the cause what  
it may, it is certain that children from  
nine months to eight or ten years of  
age are the usual subjects of the complaint,  
and more especially such as are of a full





and plethoric habit.

I think I have also observed that in members of the same family who are equally exposed to the influence of the exciting causes, those with fair complexions, fine smooth skins, blue eyes and that remarkable appearance which is said to indicate a tendency to Scrophula, are particularly liable to it.

Tracheitis has generally been divided by systematic authors, into spasmodic and inflammatory. Dr. Chapman gives it as his opinion, that whenever the attack is sudden, and violent, and death takes place in a short time, it may be considered as spasmodic, dissections in such cases showing no appearance of inflammation.

It is with great diffidence that I venture to differ from one who has written so ably on the subject, but I am rather



inclined to believe that in every instance it depends on inflammation, and that Spasm is the effect, not the cause.

It is true the appearances on dissection would often corroborate the former opinion, but we must recollect that nothing can be more deceptive than post-mortem examinations in many of the inflammatory affections, particularly those which are seated in secret tissues. The presence of blood in an inflamed part, is influenced by irritation, when the approach of death irritation ceases, the blood is thrown into the larger vessels, and unless inflammation has been sufficiently great to produce effusion into the surrounding textures, no trace of it remains; of this many examples might be adduced. The causes which produce it, the treatment indicated, and its usual termination, alike point it out as belonging



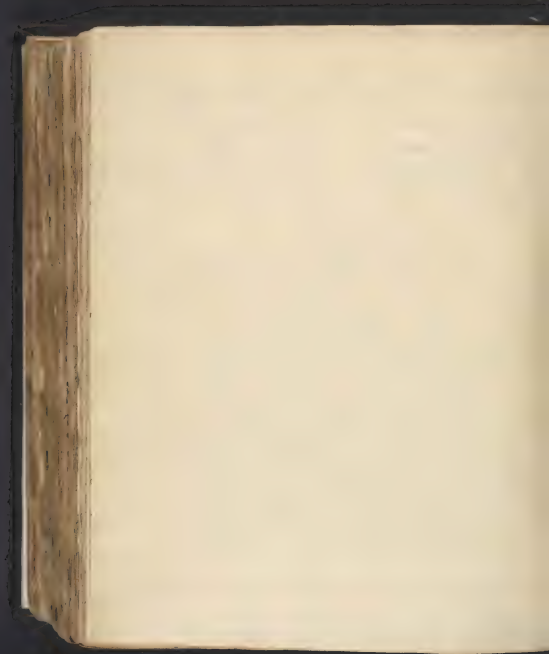
strictly to the phlegmasias. (But whether,  
it be of a rheumatic or inflammatory nature  
(as Dr. G. very justly remarks) is a matter of  
not the least practical importance the remedies  
indicated in either, case being, precisely the same

### Of the Symptoms

An attack of Croup most commonly  
follows an unusual exposure to the weather  
(during a cold raw day) tho' it sometimes makes  
its appearance without any apparent cause.

The child towards evening appears dull  
and listless, shuts its eyes, is in aversion to his usual  
amusements and expresses a desire to sleep.

As the disease advances the voice becomes  
hoarse the respiration is laborious and wheezing  
and is frequently interrupted by a  
cough of such a peculiar character as to  
be considered the most infallible diagnostic



symptom. This cough has been said to resemble the barking of a little dog, the crowing of a cock, and also the voice of a person speaking through a brass tube it is a very remarkable sound and when once heard will never be forgotten. There is generally an expectoration of a thick viscid mucus which blocks up the larynx, and produces a sense of suffocation, very distressing to the patient; he starts up, violently agitated, tosses himself about, and by frequent change of posture endeavours to obtain relief.

The pulse is quick, irregular and weak, the skin dry and hot, the thirst great, the power of swallowing in some measures impeded.

The face in the commencement of the attack is much flushed and during its progress assumes a dark red or purple hue. The disease may continue in this way for,



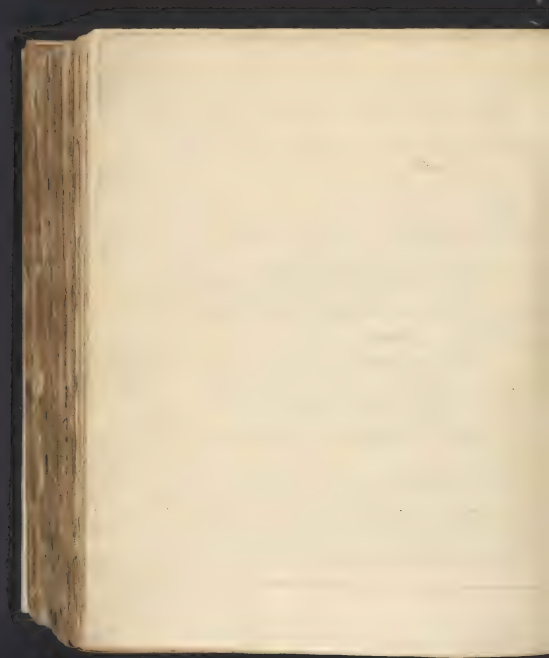


Several days, with occasionally slight intermissions, the child becoming gradually weaker, after, such, paroxysm. till finally he expires with all the appearances of strangulation.

This is the usual form of an attack of croup. In those cases where the inflammatory symptoms are most prominent, it comes on gradually, and is preceded by pyrexia, loss of appetite, and the other concomitants of a febrile affection.

On dissection the trachea and bronchial ramifications commonly appear inflamed, filled with mucus, or lined with a deposition of lymph in the form of a membrane.

When the disease has been protracted, and assumed somewhat of a chronic state, there often appears streaks of pus, showing a more advanced stage of inflammation.



There are also marks of congestion in the lungs.

The treatment may be divided into two parts: First, that proper in the early or inflammatory stage, and secondly, that which is indicated in the more advanced or pulmonick form.

As the disease when it comes on suddenly, is generally rapid in its progress, and if not arrested in its first diurnal paroxysm, commonly terminates fatally in the second, it follows that our practice should be prompt and vigorous in the commencement of an attack.

Venesection being the most effectual ought certainly to be the first remedy resorted to.

By its operation, the spasm is relaxed, the tendency to inflammation abated and the susceptibility of the system to the impression of medicines is restored. To be of service the quantity of blood drawn, should be large.



and if the urgent symptoms are not checked in a short time, by the auxiliary means, the bleeding should be repeated.

An emetic may now be administered; from twenty to sixty drops of antimonial wine every ten or fifteen minutes may be given, to a child twelve months old. If the medicine is tardy in its operation two or three grains of ipecacuanha may be added to each dose till the effect is induced.

The system being almost insensible to the empergisms of medicines in some cases, we shall find it necessary to give the emetic in very large doses.

When the emetic operates well, it will be followed by the most beneficial effects.

Expectoration is increased; the lungs relieved of the load of phlegm which oppressed them, excitement is equalized, and the disposition to febrile action subdued. In,

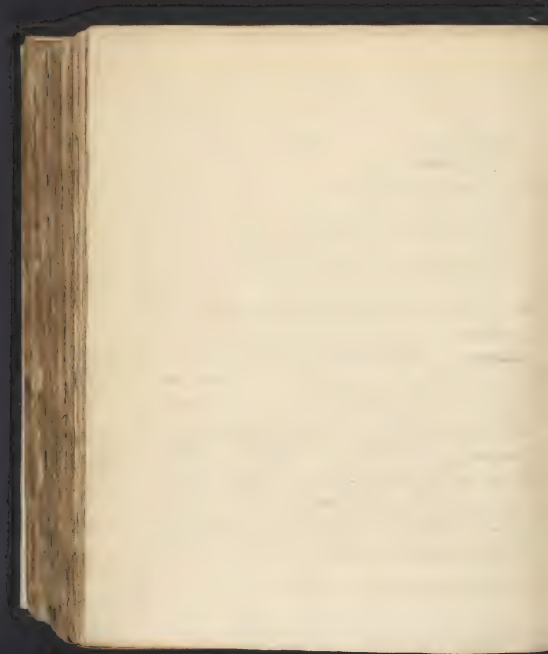


In conjunction with venesection and emetics, we should employ the warm bath, which, independent of its antispasmodic and anodyne properties, tends to accelerate the operation of the other remedies.

This is generally all that will be required in most instances; but we sometimes meet with an attack so obstinate that no remission of its violence takes place notwithstanding the above practice has been vigorously pursued;

It will then become necessary to apply sinapisms to the throat and neck; sinapisms I think are better than blisters, their action is more prompt, and we obtain their full effect, in a much shorter time.

The application of a number of leeches to the neck has also been highly recommended; but I think they may be dispensed with as they prove a source of great irritation and render the child





very restless and uncomfortable, and these cold wet bodies may also aggravate the disease.

But the remedy on which we place our chief reliance at this dangerous juncture, is bloodletting, carried so far that a state equivalent to fainting is induced; This (in the language of Dr. Wick who first carried it to this extent) is of all known remedies the most certain - The Dr. states that in a multitude of cases in which he tried this practice it had never failed when seasonably applied, that is in the early stage or first thermal paroxysm, previous to the inflammation and congestion extending to the lungs. The difficulty of breathing and other distressing symptoms cease from the instant syncope is induced, leaving the patient weak and debilitated, but free from disease; except a hoarseness which may



be treated by a dose of Calomel, followed  
by magnesia, Castor oil, or any other cathar-  
tic. And then giving at intervals of three  
or four hours, small nauseating doses of an  
-limonial wine in a few teaspoonfuls of  
Senshat Tea, or what perhaps may answer  
better, small doses of *Stim Syrup*.

It sometimes happens that, in conse-  
quence of the disease having been improv-  
-ely treated or entirely neglected in the  
commencement, it extends to the lungs,  
producing a Catarrhal State of these  
organs, from the exudation of lymph or an  
accumulation of mucus which the child  
is unable to expectorate. Or what is far  
more to be apprehended, a congestion or en-  
gorgement may have followed the protra-  
-tion of the disease.

In this stage of the complaint the un-



unfavourable symptoms above mentioned are increased in violence: The dyspnoea becomes very distressing, the pulse is small, weak, and very frequent: The face assumes an ashy or leaden colour and a general debility and prostration supervene.

When from the expectoration and cough (which it is said never occurs in the engorged state) we have reason to suppose it depends on collection of mucus, our chief dependence must be placed in emetics and the warm bath which should be continued till relief is obtained. In the engorged state of the lungs small and repeated bleedings, Calomel largely administered, together with cups and blisters to the thorax constitute the treatment I would recommend.

It has been said by Dr Rush that Peruvian Bark is not a more valuable remedy in intermittents, than calomel



in cynanche trachealis, and the result of several cases which occurred in the practice of my preceptor, and came immediately under my own observation, has inspired me with full confidence in its efficacy.

In the cases alluded to the disease had been supposed to exist for sometime before medical advice was sought, and became so firmly established that emetics, venesection, the warm bath and all the usual means, were tried without success. At this perilous juncture, the mercurial practice as recommended by Dr. Hamilton was had recourse to, and pushed to its utmost extent: to the child which was about three years old, 140 grains of calomel + was administered in less than twenty hours.

By its operation the most complete relief was obtained, and that previous to any evacuation, for the bowels remained obstinately





constipated untill the disease yielded.

The child recovered without any recurrence of bad symptoms. As the other cases (amounting to four or five) were very similar to the preceding it will be unnecessary to give a particular detail of them.

I know that objections have been made to this method of treating croup, and that too by the author of the practice himself as well as many other respectable physicians; in answer to this I must say that, when from my own observation I know a remedy to be effectual in the removal of a disease, I feel myself bound to prescribe it independant of all authority.

